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NOASAURUS

When *Noasaurus* hunted in packs, these little dinosaurs were able to attack half-grown sauropods.

Noasaurus was a small, active theropod that was a successful hunter. Large plant-eaters such as *Saltasaurus,* which lived in South America at the same time as *Noasaurus*, needed to keep a protective eye on young or sickly members of their families to protect them from these predators.

SURPRISE ATTACK

A pack of meat-eaters such as *Noasaurus* would spring a sudden attack on their unwary victims, completely overpowering them within a matter of minutes.

UNIQUE FEATURE

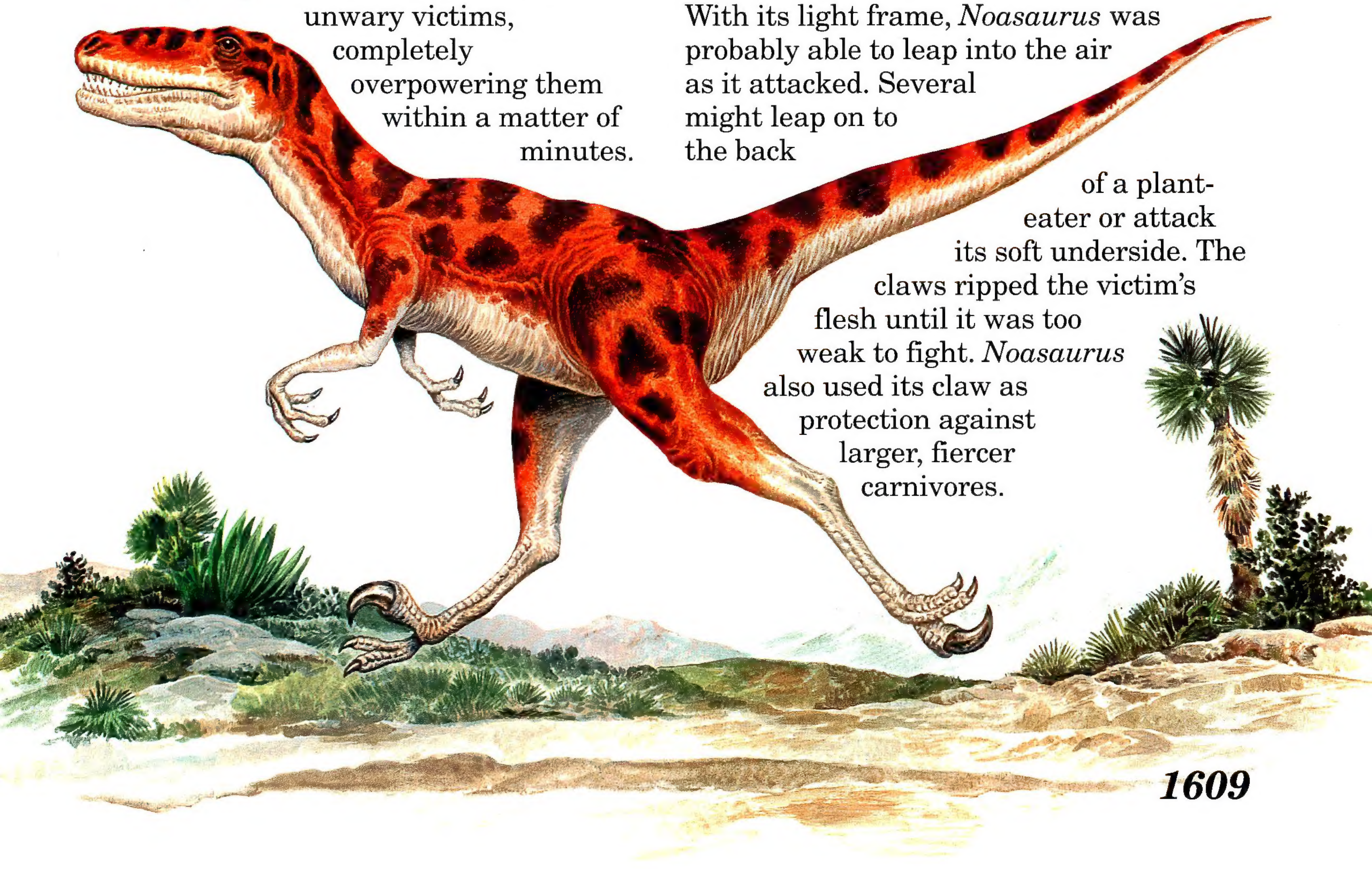
Among the scattered fossils of *Noasaurus* was part of a skull, pieces of backbone and two foot bones. But the most exciting find was a large claw, about as long as your thumb. When experts examined this closely, they found that it was unique.

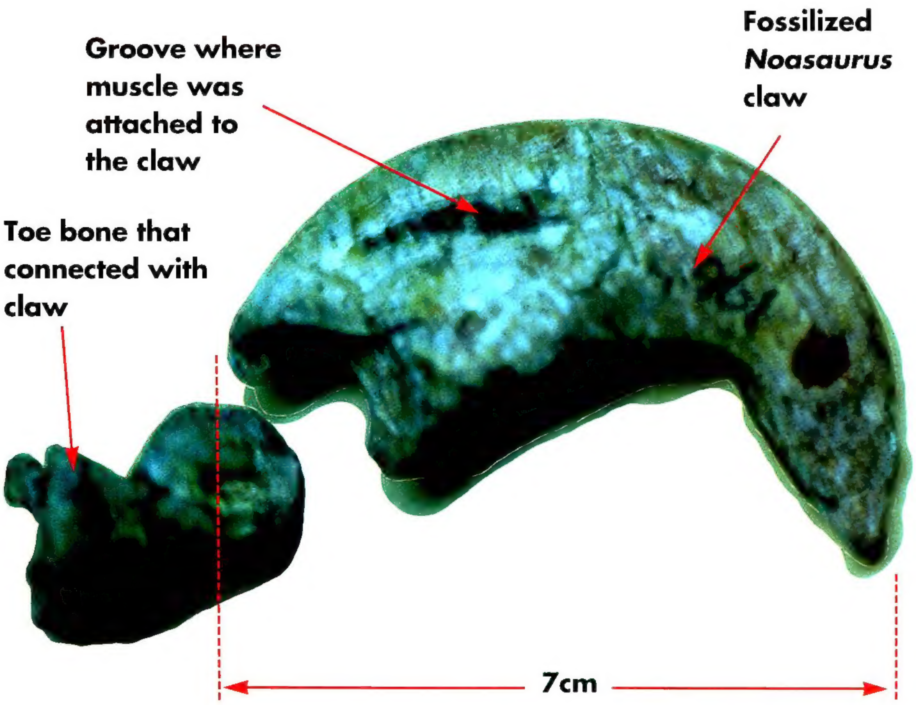
CLEVER CLAWS

At the back of the claw there was a groove or pit where a powerful muscle was attached. This meant that the claw could be pulled back when *Noasaurus* was running and brought forward when it wanted to attack.

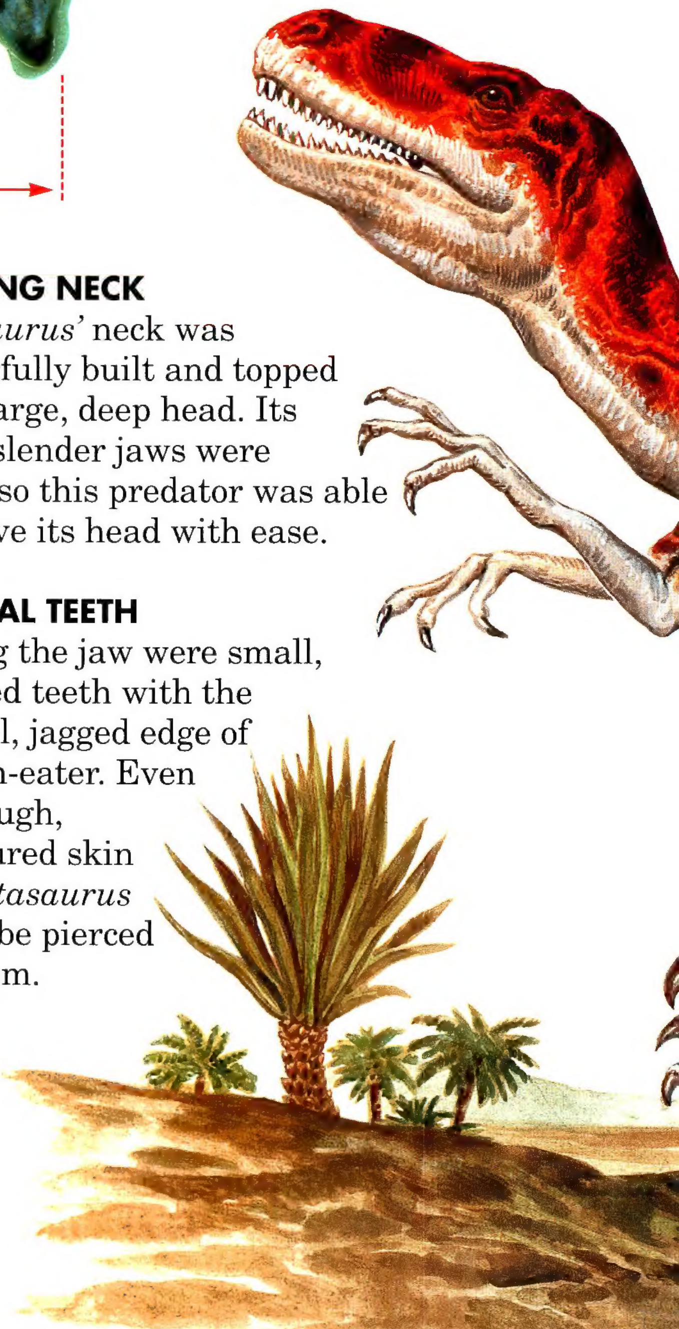
ATTACK AND DEFENCE

With its light frame, *Noasaurus* was probably able to leap into the air as it attacked. Several might leap on to the back of a plant-eater or attack its soft underside. The claws ripped the victim's flesh until it was too weak to fight. *Noasaurus* also used its claw as protection against larger, fiercer carnivores.




Groove where muscle was attached to the claw
Toe bone that connected with claw
Fossilized *Noasaurus* claw
7cm

No other dinosaur had a claw like this. *Noasaurus* could pull these large claws back when it ran, but it could stick them out when it attacked.



ARMS FOLDED

As it ran after its prey, with its body straining forward, *Noasaurus* was just shorter than the height of an adult human. Its arm bones have not yet been found, but *Noasaurus* probably kept its arms folded high up against its chest.

STRONG NECK

Noasaurus' neck was powerfully built and topped by a large, deep head. Its long, slender jaws were light, so this predator was able to move its head with ease.

TYPICAL TEETH

Lining the jaw were small, pointed teeth with the typical, jagged edge of a flesh-eater. Even the tough, armoured skin of *Saltasaurus* could be pierced by them.

IT'S A FACT

SOUTH AMERICAN DINOSAURS ARE HARD TO FIND

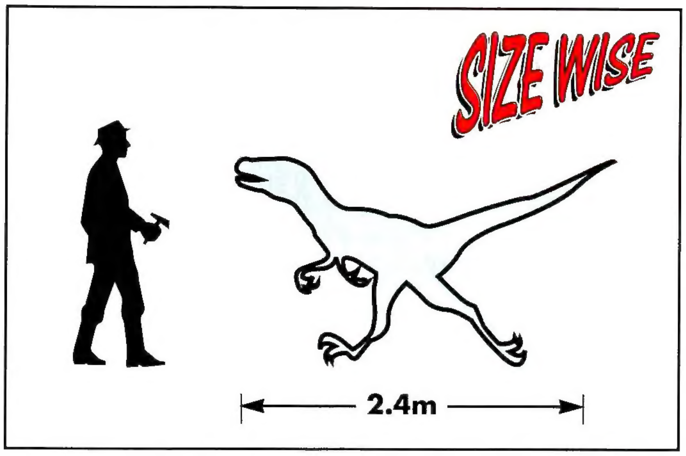
South America contains some of the most difficult country in the world. Dense vegetation and jungle make life hard for the fossil-hunter and most discoveries have been made in desert-like regions and grasslands. In spite of these difficulties, some exciting discoveries have been made in Argentina, Brazil and Uruguay.

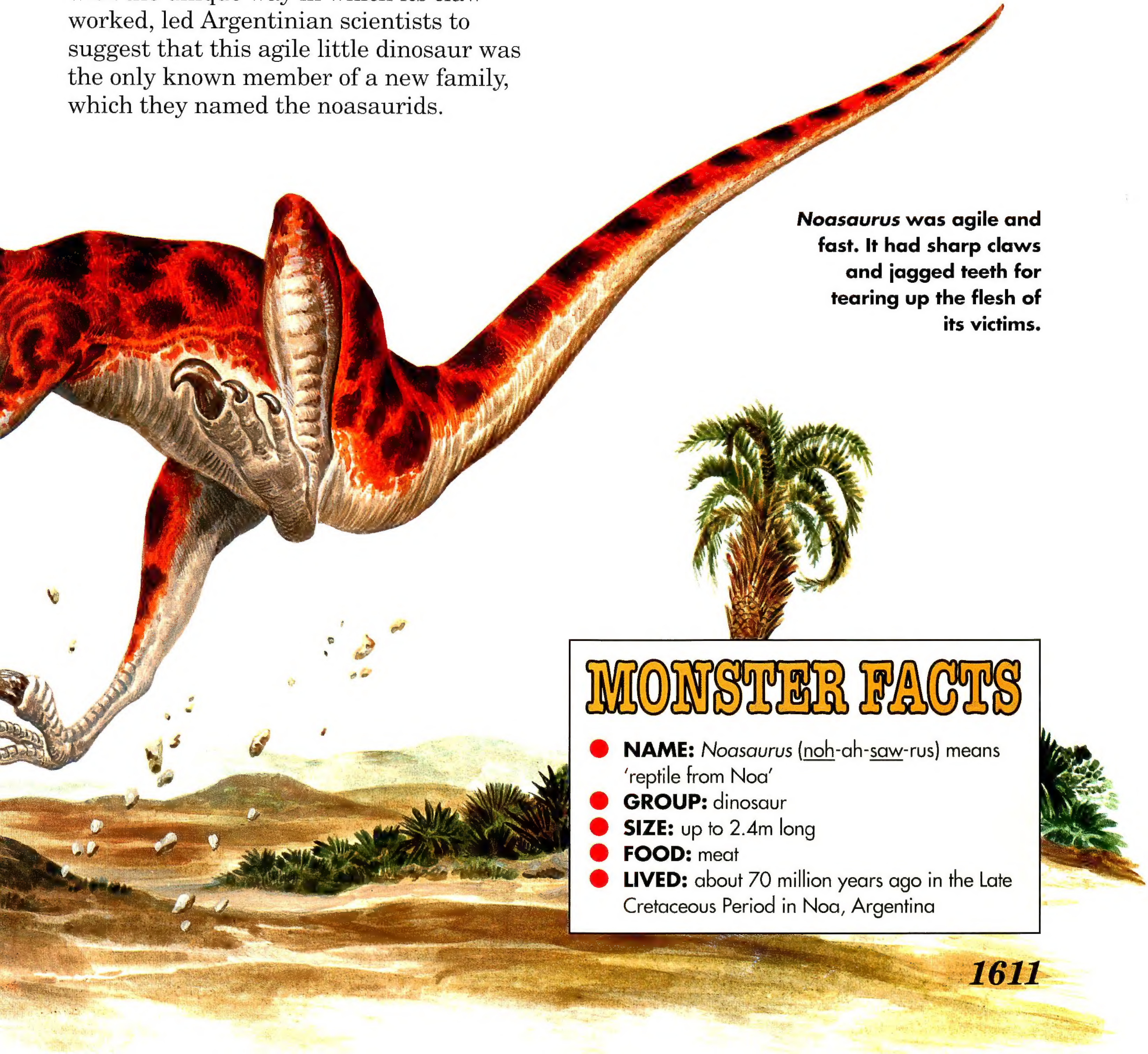
NEW FAMILY ...

Other dinosaurs have been discovered that have hooked claws very like those of *Noasaurus*. *Deinonychus* is just one example. But experts think that *Noasaurus* belonged to a different family group from all the others.

... NEW NAME

Noasaurus' head was different from that of other dinosaurs. This difference, together with the unique way in which its claw worked, led Argentinian scientists to suggest that this agile little dinosaur was the only known member of a new family, which they named the noasaurids.





Noasaurus was agile and fast. It had sharp claws and jagged teeth for tearing up the flesh of its victims.

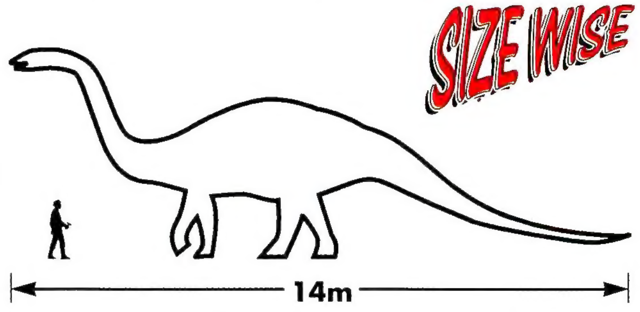
MONSTER FACTS

- **NAME:** *Noasaurus* (noh-ah-saw-rus) means 'reptile from Noa'
- **GROUP:** dinosaur
- **SIZE:** up to 2.4m long
- **FOOD:** meat
- **LIVED:** about 70 million years ago in the Late Cretaceous Period in Noa, Argentina

DATOUSAURUS

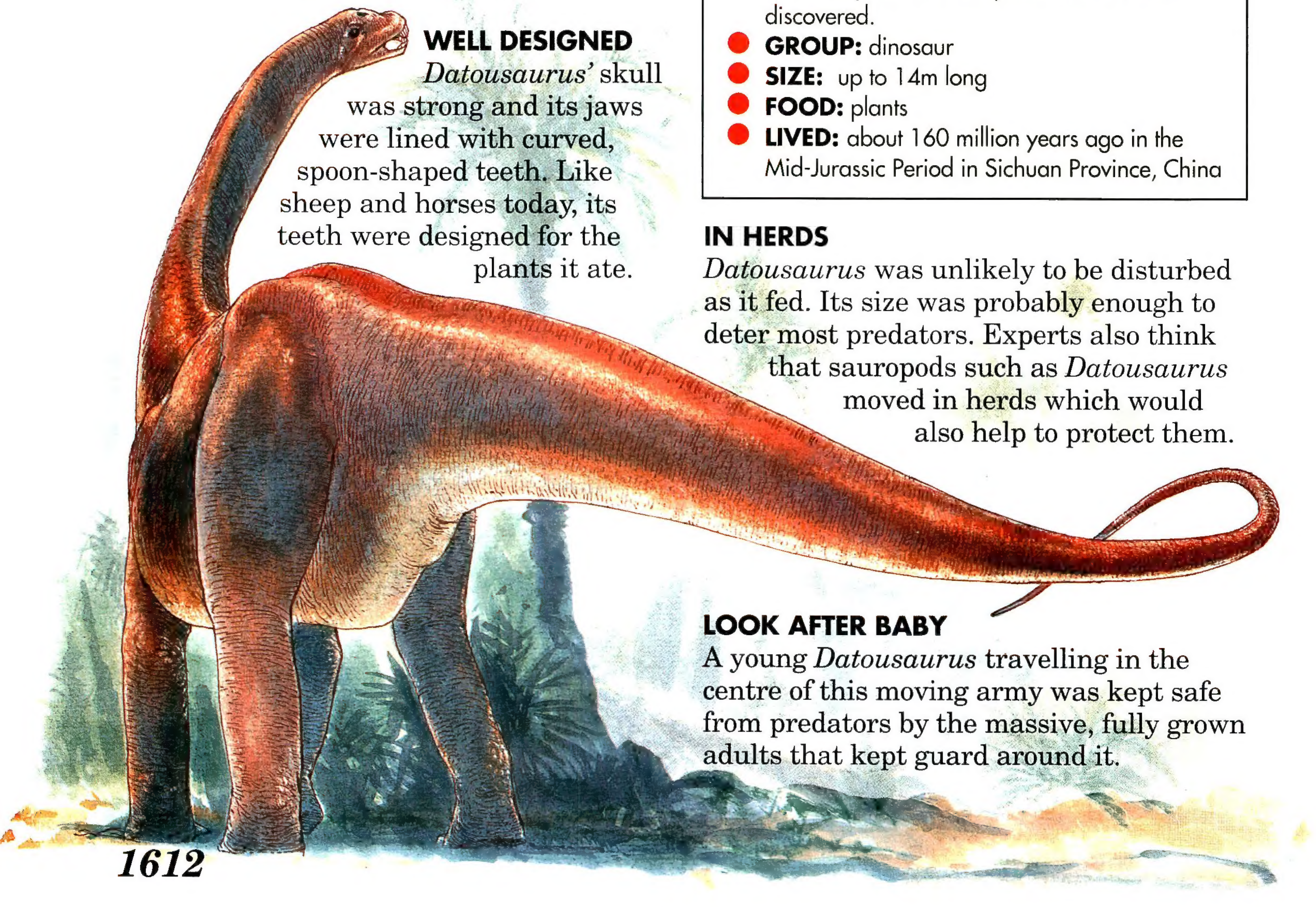
The early sauropod, *Datousaurus*, was a giant among the dinosaurs of Jurassic China.

D*atousaurus* was discovered by a Chinese expedition at the end of the 1970s. Its huge body was balanced at each end by a long neck and tail. As *Datousaurus* wandered through thick forests of pines and tree ferns, it would have stopped for the occasional snack and reached high into the branches for the juiciest shoots.



MONSTER FACTS

- **NAME:** *Datousaurus* (dat-oo-saw-rus) means 'Datou reptile' after the place where it was discovered.
- **GROUP:** dinosaur
- **SIZE:** up to 14m long
- **FOOD:** plants
- **LIVED:** about 160 million years ago in the Mid-Jurassic Period in Sichuan Province, China



WELL DESIGNED
Datousaurus' skull was strong and its jaws were lined with curved, spoon-shaped teeth. Like sheep and horses today, its teeth were designed for the plants it ate.

IN HERDS
Datousaurus was unlikely to be disturbed as it fed. Its size was probably enough to deter most predators. Experts also think that sauropods such as *Datousaurus* moved in herds which would also help to protect them.

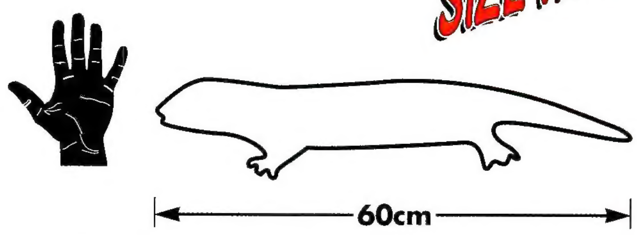
LOOK AFTER BABY
A young *Datousaurus* travelling in the centre of this moving army was kept safe from predators by the massive, fully grown adults that kept guard around it.

SEYMOURIA

Seymouria was one of the first amphibians able to live almost entirely out of water.

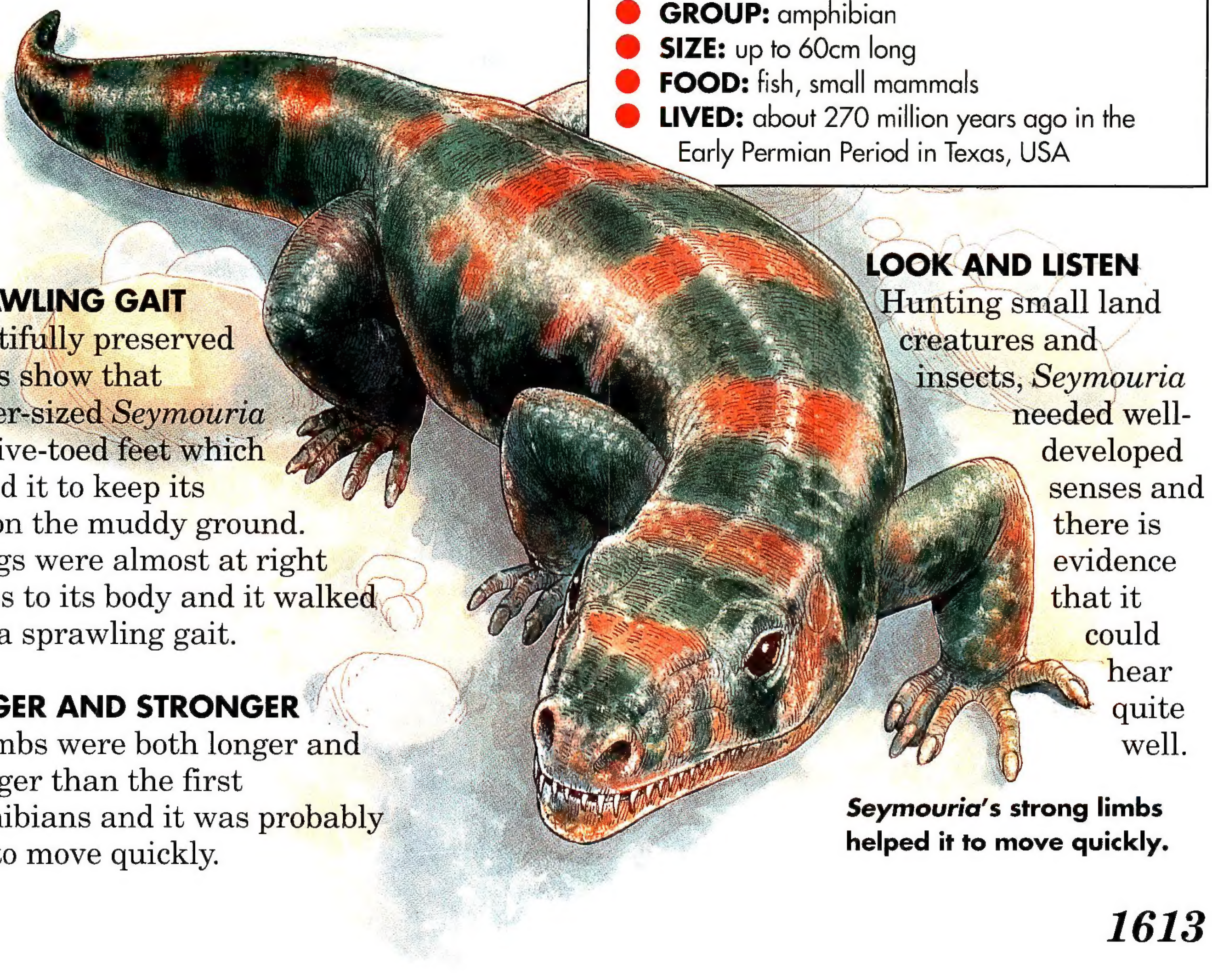
Seymouria evolved when creatures were beginning to crawl from steamy swamps to hunt for food on dry land. It was an amphibian and well able to cope with life on land. To live on land, animals needed new features that would help them to survive. Their bodies had to be more waterproof and their limbs strong enough to bear their weight.

SIZE WISE



MONSTER FACTS

- **NAME:** *Seymouria* (see-more-ree-a) was named after Seymour in Texas, where it was found.
- **GROUP:** amphibian
- **SIZE:** up to 60cm long
- **FOOD:** fish, small mammals
- **LIVED:** about 270 million years ago in the Early Permian Period in Texas, USA



SPRAWLING GAIT

Beautifully preserved fossils show that badger-sized *Seymouria* had five-toed feet which helped it to keep its grip on the muddy ground. Its legs were almost at right angles to its body and it walked with a sprawling gait.

LONGER AND STRONGER

Its limbs were both longer and stronger than the first amphibians and it was probably able to move quickly.

LOOK AND LISTEN

Hunting small land creatures and insects, *Seymouria* needed well-developed senses and there is evidence that it could hear quite well.

***Seymouria*'s strong limbs helped it to move quickly.**

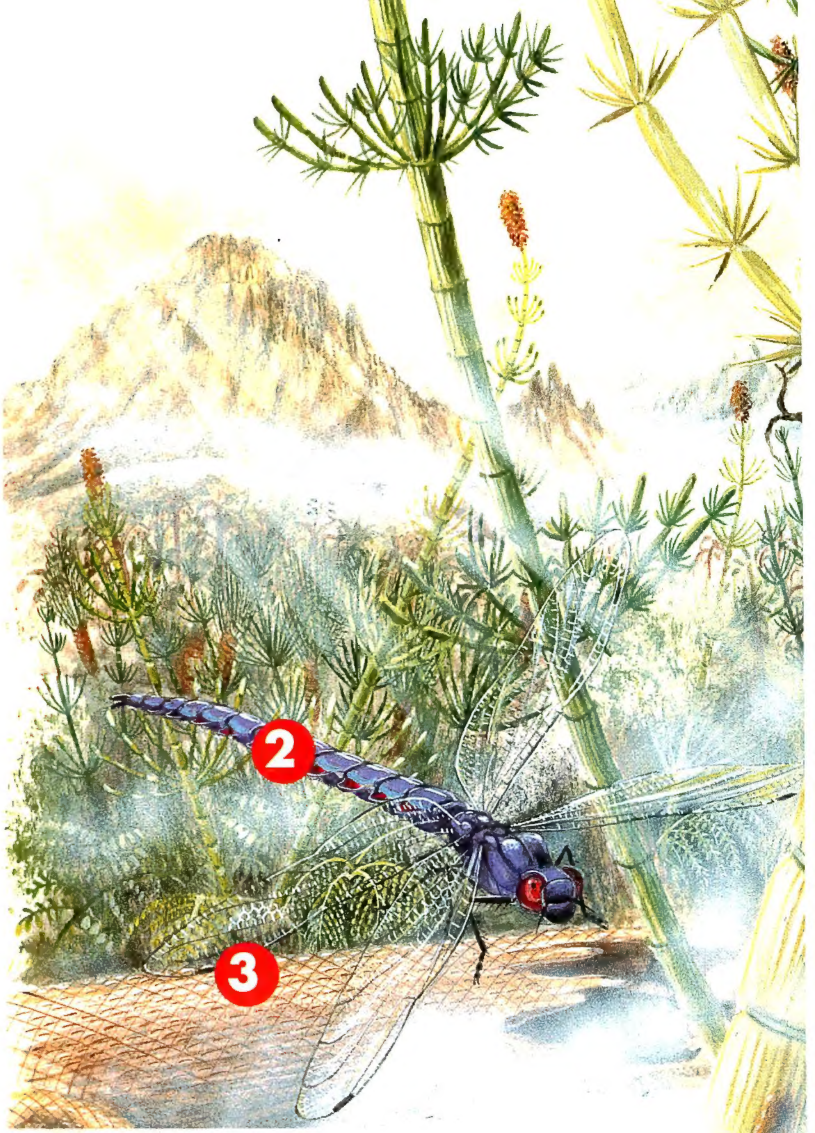
Swamps, coal and amphibians

During the Carboniferous Period, 362-290 million years ago, steamy, swampy forests covered the land and amphibians ruled.

Imagine standing up to your knees in murky water with your feet deep in mud. Every time you try to lift your foot out of the cold slime, there is a burst of bubbles and the stench of rotting vegetation. Around you is a dense bed of what look like yellow-green Christmas trees.

SILENT GREENERY

The really strange thing is the silence. Some distance away you can hear the slight movement of some water. The tops of the strange plants are swishing quietly in the wind. But that is all. There is no roar of an animal or hint of birdsong.

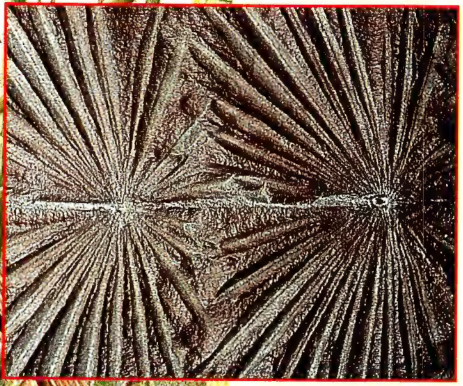


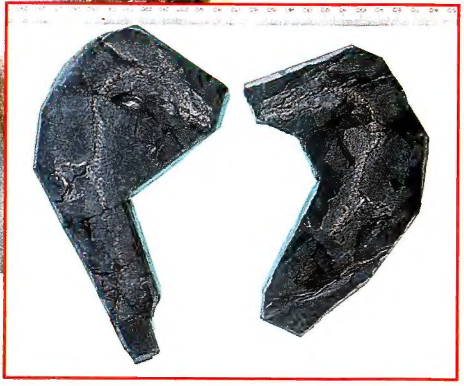
DUCK!

Suddenly, the shadow of some flying thing appears. You can also hear a loud ‘frrrrm’ – the rapid flapping of long, sparkling wings. A dragonfly swoops down and disappears between the stems of the plants. It is *Meganeura* – a dragonfly as big as a parrot!

What is A DELTA?

A delta is a fan-shaped piece of land that sticks out into the sea. It is formed from very fine earth or silt washed down to the sea by rivers. When the river waters meet the sea they slow down and the silt they are carrying builds up at the mouth of the river. Some deltas are vast. One of the most famous is the Nile Delta in Egypt. The soil is good for farming, but deltas are often flooded.





Fossils of lizards (below) and horsetails (above) from Carboniferous times.

WHERE ARE YOU?

You are standing in the muddy waters of a Carboniferous delta. Dinosaurs, mammals and birds do not yet exist. The plants that surround you are giant horsetails. They are ancient relatives of the little, wispy plants you come across in ditches today.

① **Horsetails, as tall as today's trees, grew out of the swampy Carboniferous waters.**

② **Dragonflies, such as parrot-sized *Meganeura*, flitted among the tall plants.**

③ **Plants and trees died and fell into the swampy waters, eventually to form peat.**

④ **Beneath the waters swam *Eogyrinus*, an early amphibian.**

DELTAS AND SWAMPS

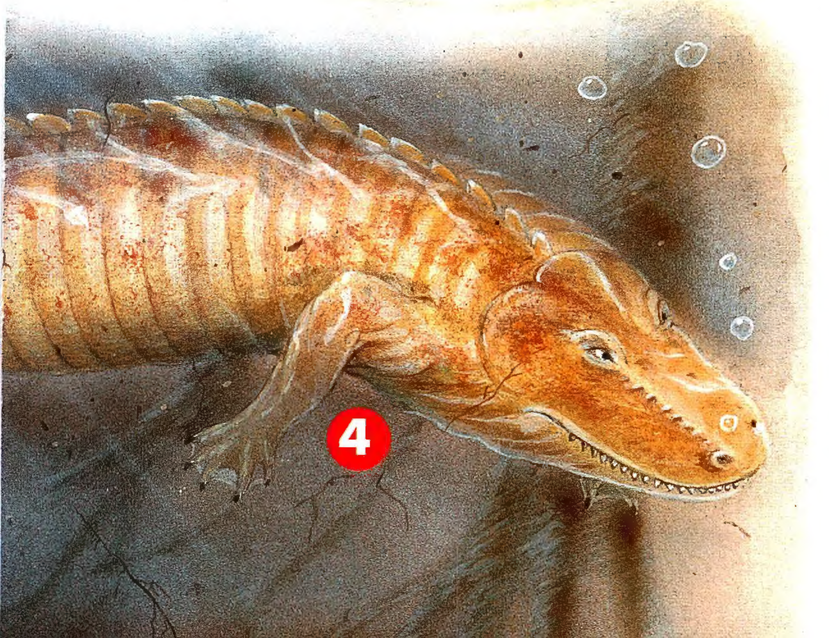
Deltas were created in Carboniferous times, especially across northern Europe and North America. Huge mountain ranges, which had formed during the Devonian Period, began to be worn down by wind and rain. The rocks were ground down to a fine sand, called silt, which formed into areas of land when it hit the sea. This damp, swampy land was covered by dense forests filled with strange ferns, reeds and trees.

THE AGE OF AMPHIBIANS

The Carboniferous Period is also called the Age of Amphibians. Conditions were just right for them. There was plenty of water where they could lay their eggs. Their tadpoles could hatch, develop in the water and then crawl on to land where there was plenty of food for them.

MONSTERS OF THE MURKY WATERS

Eogyrinus (ee-oh-gee-rine-us) was one of the many amphibians that thrived in Carboniferous times. It had a long, eel-like body and tail, and a head like a crocodile. It lived entirely in the water and probably swam through the horsetails by making 's' shapes with its body.



GREEN GLOOM

The trees in the Carboniferous forests were not like trees you can see today. They were actually giant versions of some of today's plants called horsetails and clubmosses. The branches and leaves of trees such as *Lepidodendron* (lep-i-doh-den-dron) and *Sigillaria* (sig-ill-air-ee-ah) formed a ceiling above the forest, plunging the forest floor into darkness.

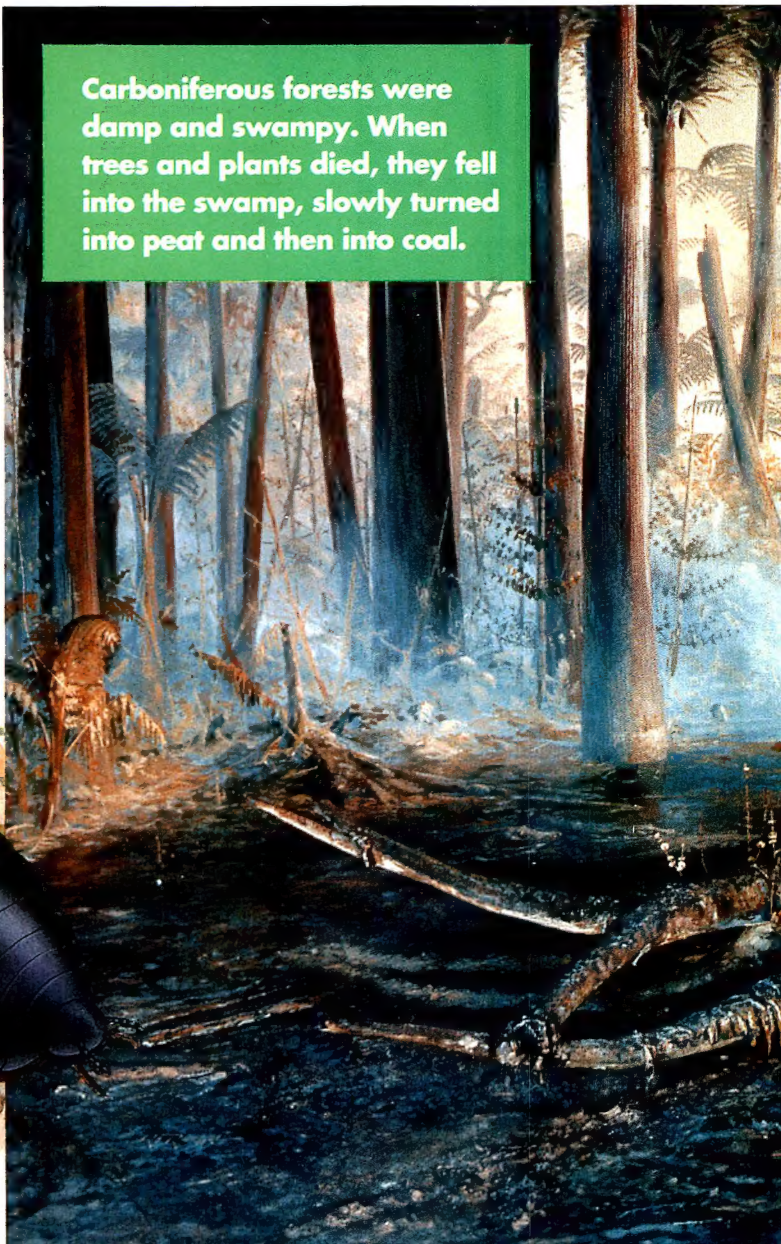
Westlothiana **was one of the first reptiles on Earth.**

FUTURE FUEL

Near the ground was a dense tangle of ferns growing in the damp soil. When plants and trees died, they became absorbed into the swamp and gradually turned into peat. Peat is made from squashed layers of rotting vegetation. When the peat itself becomes squashed by layers of mud and sand, it turns into coal.

CHANGING LANDSCAPE

The beds of giant horsetails would have covered the shallow Carboniferous waters. The higher ground would have been covered in different plants. These were a very primitive type of conifer, related to today's fir trees.



Carboniferous forests were damp and swampy. When trees and plants died, they fell into the swamp, slowly turned into peat and then into coal.

Arthropleura **was a gigantic millipede. It lived in the Carboniferous forest.**

GIANT MILLIPEDE

Arthropleura, (ah-throw-pler-ah) was a millipede as long as you are. Some millipedes grew to be 2m long! They lived in the damp, swampy Carboniferous undergrowth.

A HINT OF THE FUTURE

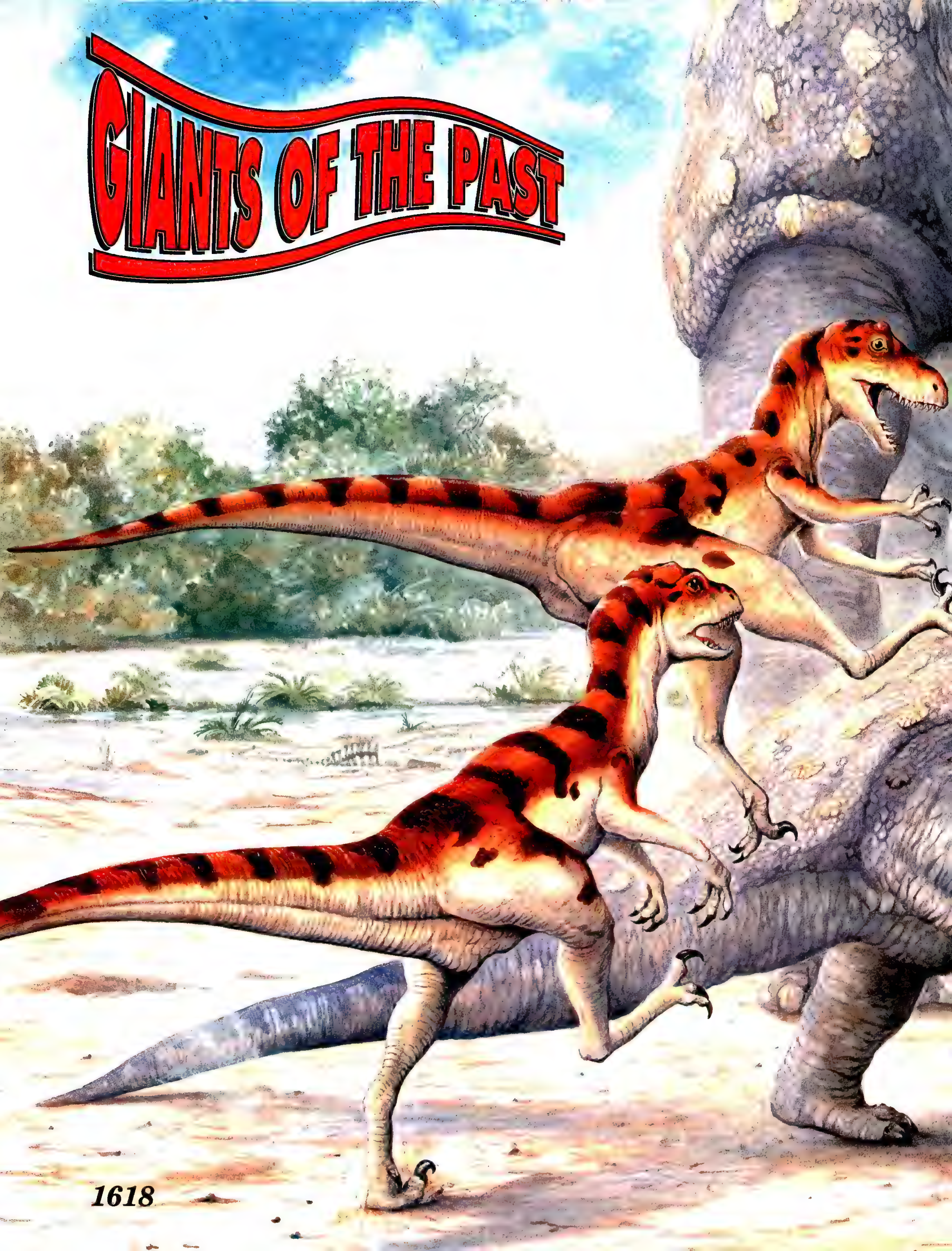
Other, smaller animals lived on the forest floor too. Little lizard-like animals scampered around, using their tongues to 'taste' their surroundings. These were the early reptiles. One of these was *Westlothiana* (west-low-thee-ah-na). The Carboniferous Period saw the evolution of the first reptiles. They were the ancestors of both the dinosaurs and the mammals.

Is it true that coal is made from trees and shrubs?

Yes. The coal that is burned today began life as plants about 300 million years ago in the Carboniferous Period. When dying trees and other plants fell into the Carboniferous swamps they were covered in mud. Eventually the plant remains dried out and formed something called peat. Deep in the ground, buried under layers of soil and rock, the peat was pressed down and heated until it eventually became coal. That is why coal often has to be dug out thousands of metres below ground. It is also the reason why miners sometimes find the fossils of tree trunks and plants in coal mines.

Coal miners

GIANTS OF THE PAST

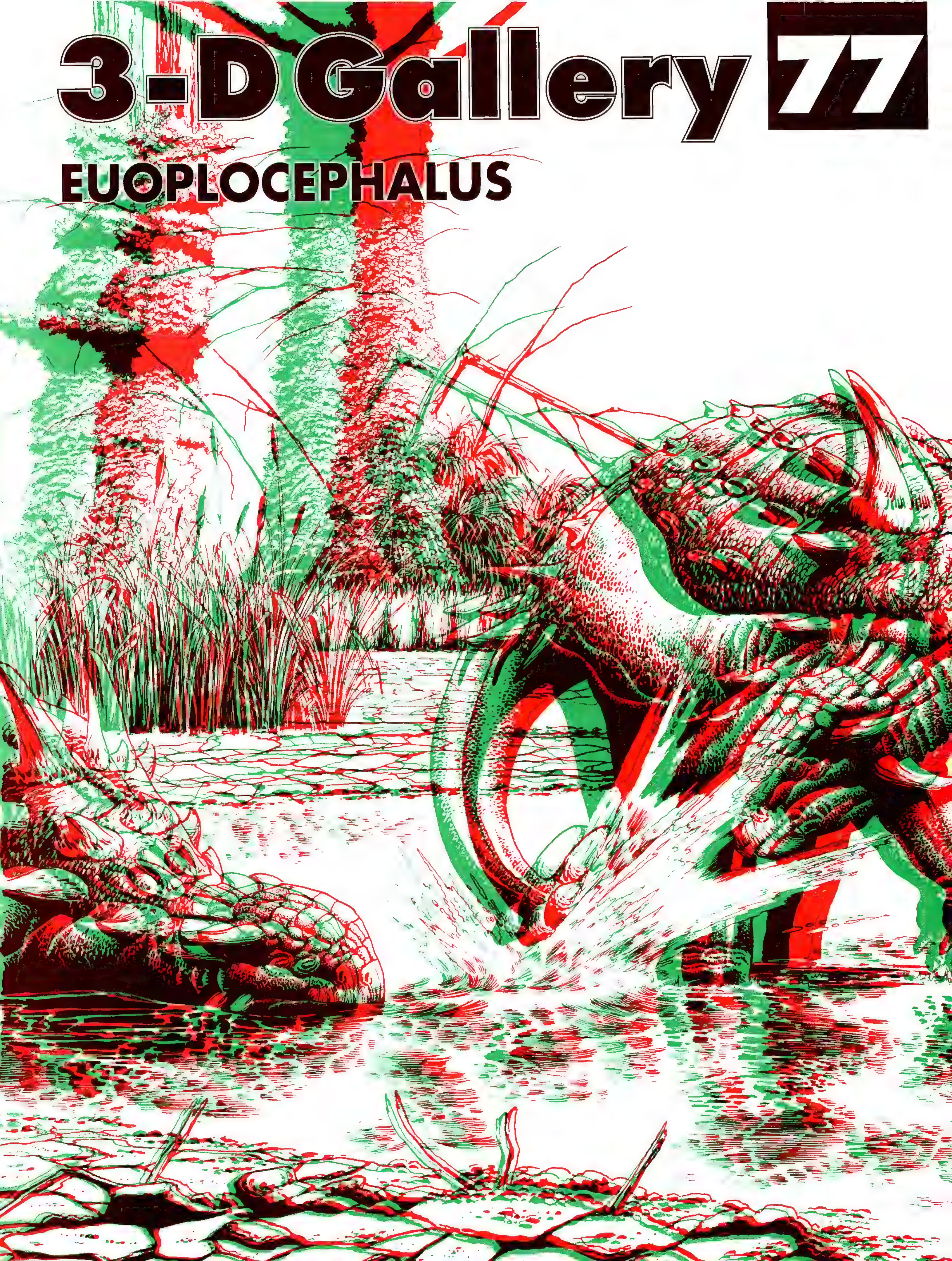


NOASAURUS

A mother *Saltasaurus* watches helplessly as a pack of *Noasaurus* attacks her baby. The young *Saltasaurus* is over 5m long but is no match for these little predators. With their vicious claws and jagged teeth the *Noasaurus* will make short work of the terrified youngster. Plodding plant-eaters must frequently have fallen victim to agile *Noasaurus* herds in South America 70 million years ago.

3-D Gallery 77

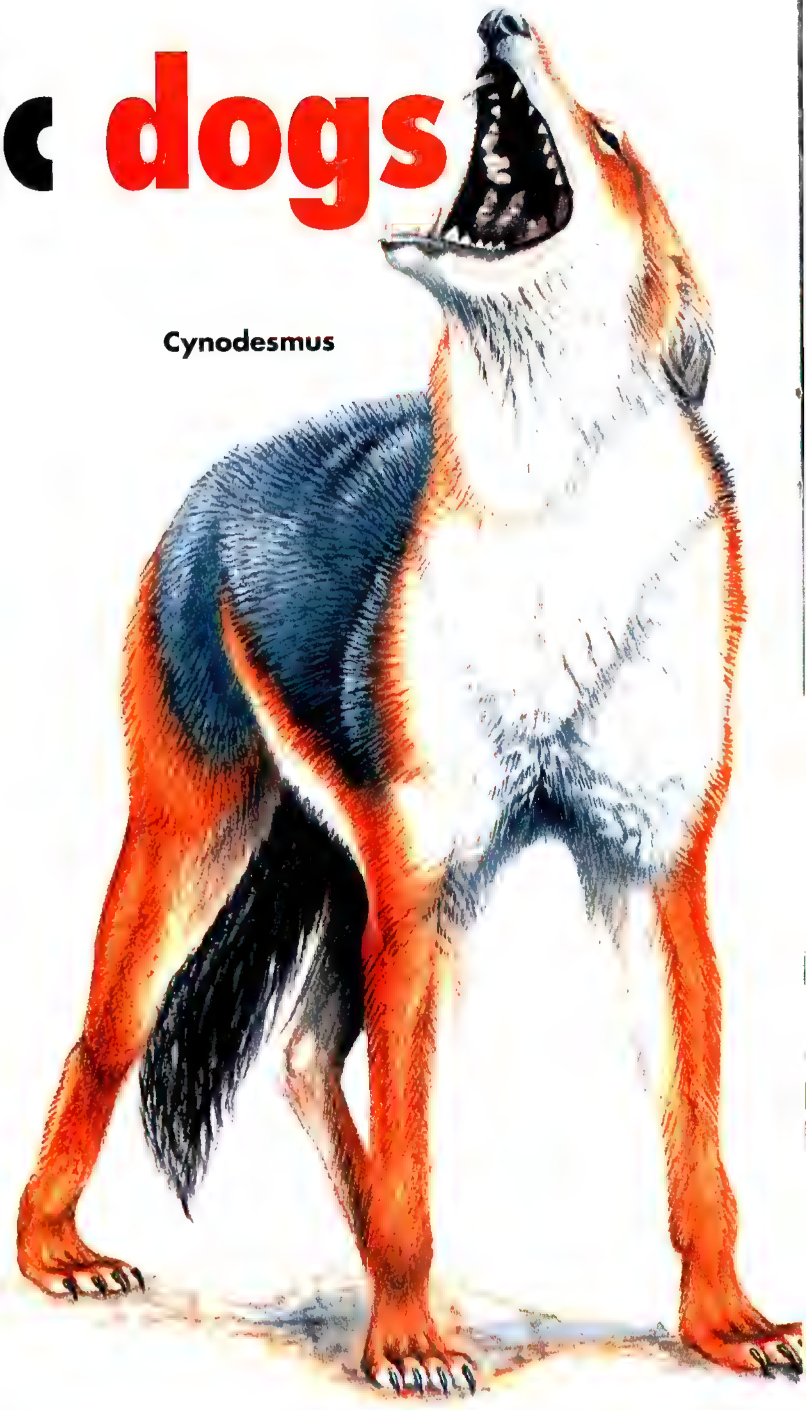
EUOPLOCEPHALUS



On a hot day in Late Cretaceous North America, a herd of *Euoplocephalus* takes a cooling dip in a peaceful lake. These heavily armoured dinosaurs usually swing their mighty tail-clubs to kill predators or fend off enemies. But the clubs are also useful for swishing water over their over-heated bodies.

Prehistoric dogs

The dogs we keep as pets are descended from the first dogs that lived about 40 million years ago.



Cynodesmus

Dogs are a great success story. They can live in many different environments and eat all sorts of food. Dogs belong to a family that includes foxes, wolves and coyotes. Most early dogs evolved in North America from Late Eocene times onwards.

OTHER RELATIVES

Dogs belong to a group called canids. Canids belong to a large group of carnivores that includes otters, weasels, cats, mongooses, seals and walruses.

SUPERB HUNTERS

Some dogs are superb hunters with sharp senses and great stamina. Running on the tips of their four-toed feet, they are able to chase prey over long distances.

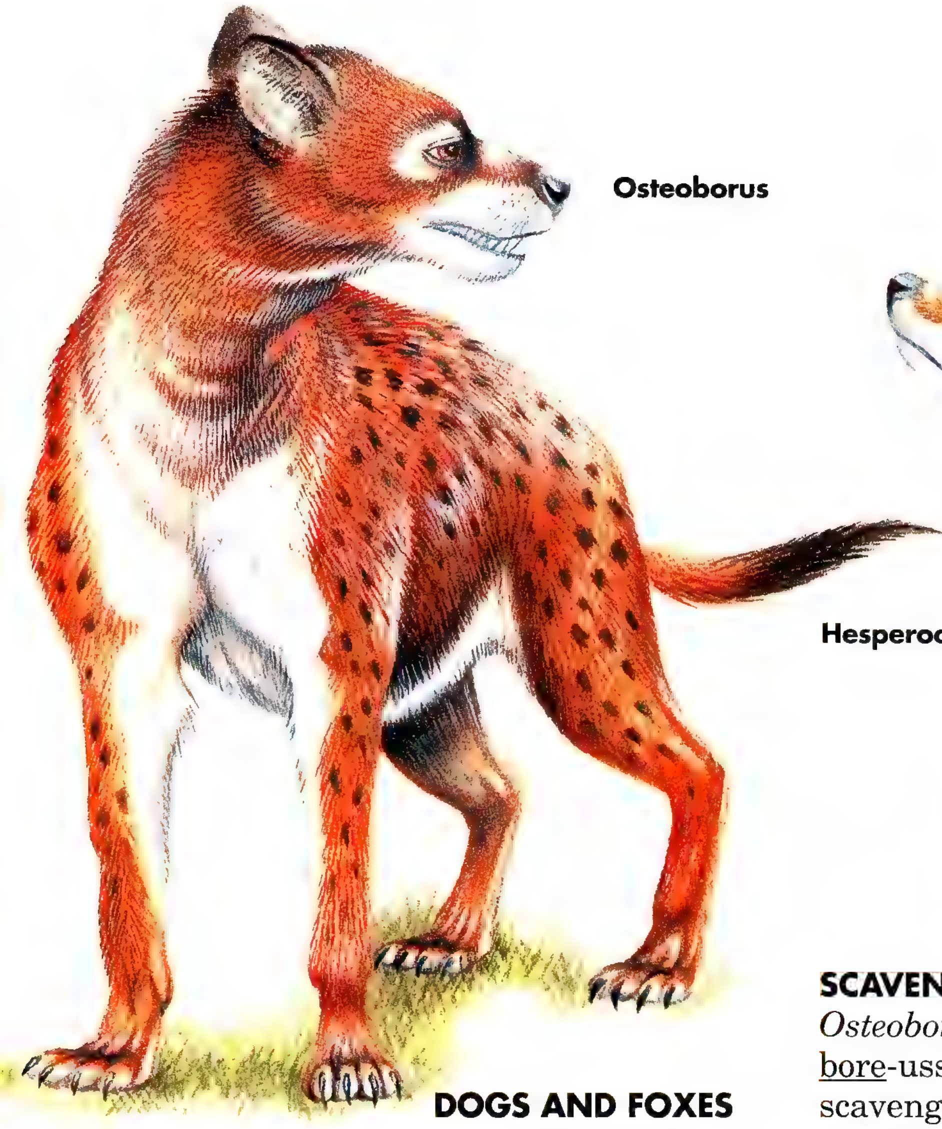
IT'S A FACT

DOGS AREN'T FUSSY EATERS!

Dogs are usually omnivorous – they eat a wide range of meat, bones, fruit and insects. They rip flesh apart with long pointed teeth and crunch up tough food with powerful molars. So wherever they live, dogs are unlikely to go hungry.

DOGS IN DISGUISE

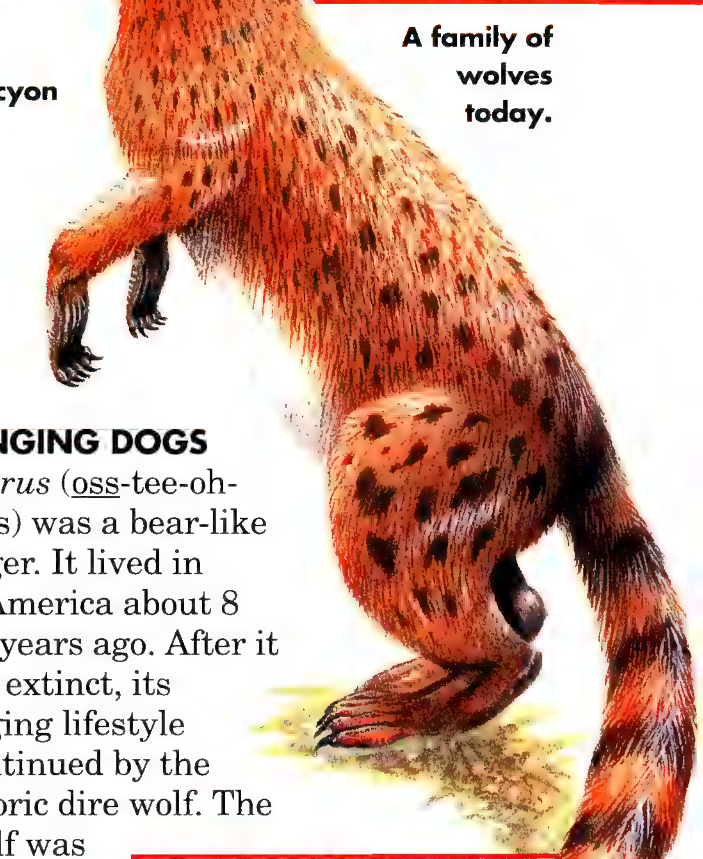
Hesperocyon (hes-per-oh-sigh-on) lived 35 million years ago and looked more like a mongoose than a dog. *Phlaocyon* (flay-oh-sigh-on) was a racoon-like dog that lived in North America in Miocene times. It ate seeds and birds' eggs, as well as small mammals and insects.



Osteoborus

DOGS AND FOXES

Cynodesmus (sigh-no-dez-mus) was the first dog to look like the dogs we know. It was the shape of an American coyote and lived in the Late Oligocene. *Cerdocyon* (ser-doh-sigh-on) was an early fox that lived in Argentina, South America. Like its descendant, the crab-eating fox, it lived by eating almost anything it found.



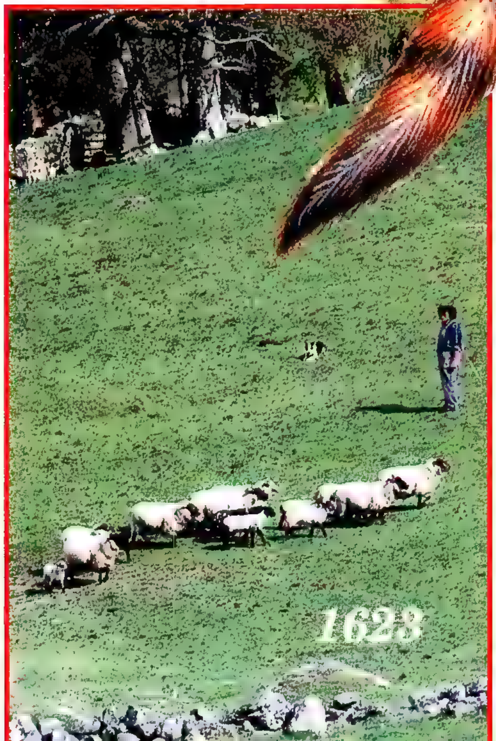
Hesperocyon

A family of wolves today.

SCAVENGING DOGS

Osteoborus (oss-tee-oh-bore-uss) was a bear-like scavenger. It lived in North America about 8 million years ago. After it became extinct, its scavenging lifestyle was continued by the prehistoric dire wolf. The dire wolf was larger than the members of the dog family shown here. It was 2m long and the others were about 80cm long.

Cerdocyon



Dogs, like this sheepdog, are intelligent and easy to train.

Mammoth deep freeze

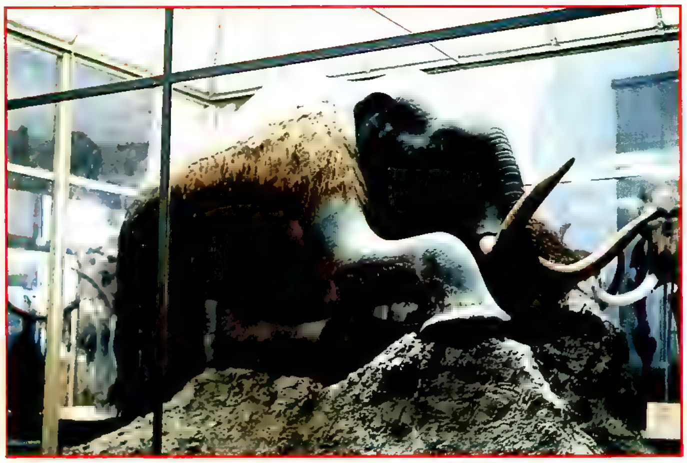
Whole mammoths, deep-frozen for thousands of years, have been dug out of the ground in Siberia.

It is very rare to find more than the bones of an animal that died a long time ago. Normally, when a creature dies, all the soft flesh, hair and scales on its body rot away to leave just the bones. But, in special circumstances, this does not happen. Scientists were thrilled to discover whole mammoths frozen into the icy ground of Siberia in the far north of Russia. Their bodies had been preserved for thousands of years by the cold, just as food is preserved in your freezer.

IT'S A FACT

PREHISTORIC PERFUME

Deep-frozen mammoths have been used in very strange ways. In 1809, a Russian government worker decided to make perfume from the soft marrow inside mammoth bones. He gathered together sackfuls of frozen bones. But they thawed too quickly and the marrow disappeared before he could collect it.



This mammoth lived in Siberia 45,000 years ago. When it died, it was buried in the ice and became deep-frozen.

IN THE KNOW

Experts know a great deal more about the mammoth because of these amazing discoveries. They know not only almost exactly how it looked, but they have also been able to work out how it moved by studying the muscles. Scientists even know what mammoths ate from examining the food in the frozen stomachs.

WOOLLY MAMMOTH

About 25 deep-frozen bodies have been discovered. They all belong to *Mammuthus primigenius*, the woolly mammoth. Woolly mammoths were smaller than today's elephants. They were well adapted to coping with freezing temperatures. They had a long, warm coat and their ears were small to stop them from getting frost-bitten. They also had a fatty hump behind their heads. Like a camel's hump, this acted as an extra store of nourishment when food and water were scarce or buried under snow.

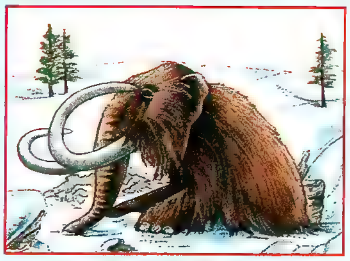
MELT DOWN

The first complete, deep-frozen mammoth to be studied was found in 1901. It was sticking out of a melting glacier on the banks of the River Berezovka in Siberia. The huge creature was perfectly preserved and scientists could see how it must have looked thousands of years ago.

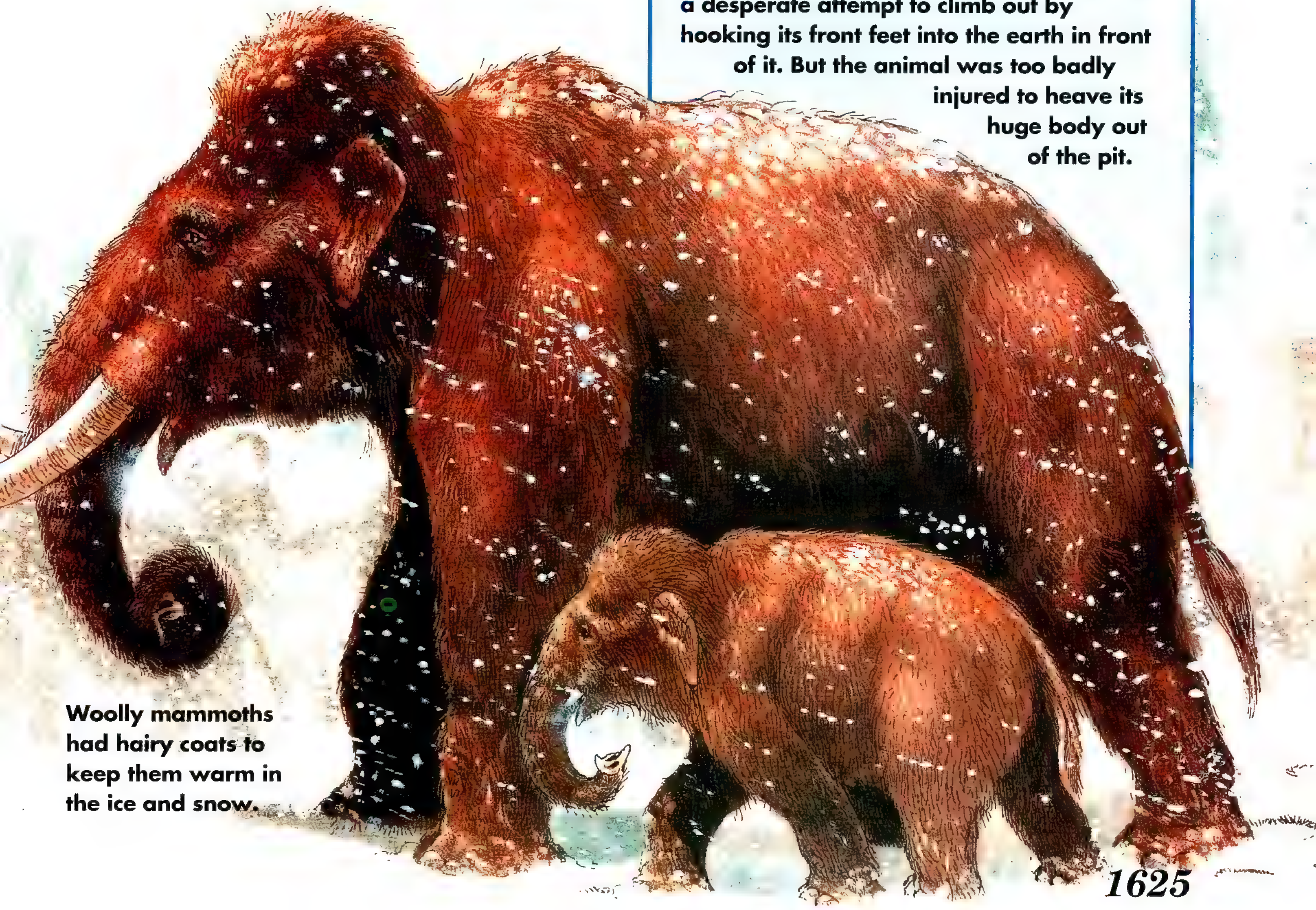
MAMMOTH INVESTIGATIONS

Scientists were able to cut open and study the smallest parts of the mammoth's body. By examining its blood, scientists learned that it was closely related to the Asian elephant. By studying its stomach contents, they found that it mainly ate grass. Seeds in its food showed that this mammoth probably died in the autumn.

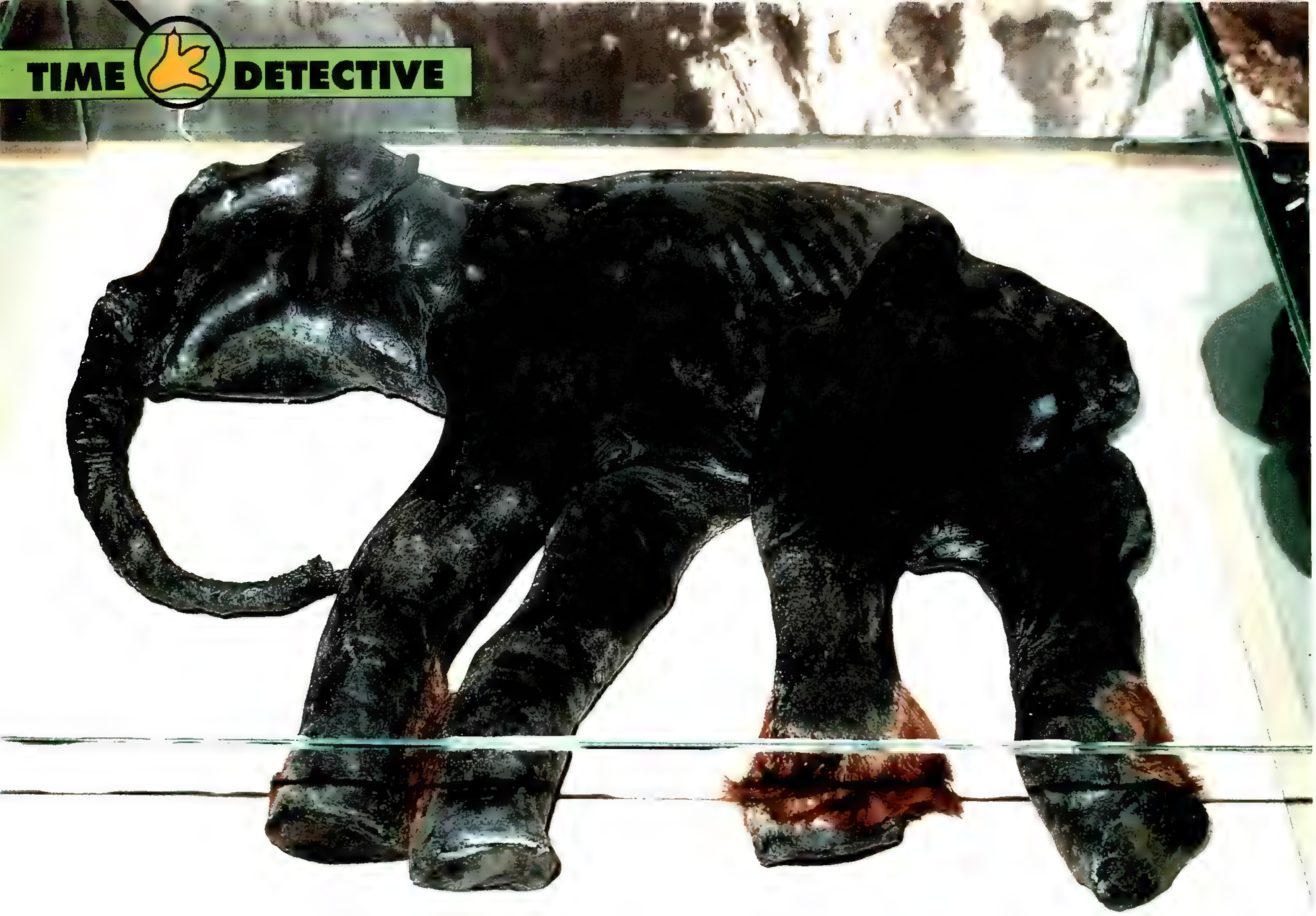
HOW IT HAPPENED



Like detectives, scientists have been able to piece together the last few hours of the Berezovka mammoth's life. The creature was grazing when it stepped on to a crevasse (a very deep crack) covered by a thin layer of soil. It plunged down into the gap and broke several bones. The mammoth made a desperate attempt to climb out by hooking its front feet into the earth in front of it. But the animal was too badly injured to heave its huge body out of the pit.



Woolly mammoths had hairy coats to keep them warm in the ice and snow.



This baby mammoth was discovered in 1977. The scientists called him 'Dima'.

BURIED BABY

In 1977, a baby mammoth was found in Siberia. He was nicknamed 'Dima'. Dima was buried under frozen earth and snow for 40,000 years and the weight flattened his body. One scientist wanted to see if a modern baby mammoth could be produced using some of Dima's body cells. They were planted inside a female Asian elephant but the experiment didn't work.

MAMMOTH FINDS

Hundreds of mammoth skeletons have been collected around the world. Scientists have already gathered a great deal of information about mammoths. But every time they examine a skeleton or body they make new discoveries.

THE BIG FREEZE

Experts used to think that mammoths died out at the end of the last Ice Age, about 10,000 years ago. But scientists working in the Arctic Circle discovered mammoth skeletons only 3,700 years old. They collected bones from Wrangel Island, off the north coast of Siberia, which proved that mammoths were living there when the pharoahs ruled Egypt.

MINI MAMMOTHS

When the last Ice Age ended, the world's climate got warmer. Mammoths preferred the cold so they moved further north to places such as Wrangel Island. They managed to live on for another 6,000 years. But, in order to survive, they had to change. Scientists discovered from teeth samples that the island mammoths evolved to become smaller.

A Stone Age painting of a mammoth. This was found on the walls of a cave in France.

ROCK ART

We also know what mammoths looked like because our Stone Age ancestors painted them on the walls of caves in France and Spain. People believed that if they drew a picture of the animal they wanted to kill, they could catch it more easily.

BONE HUTS

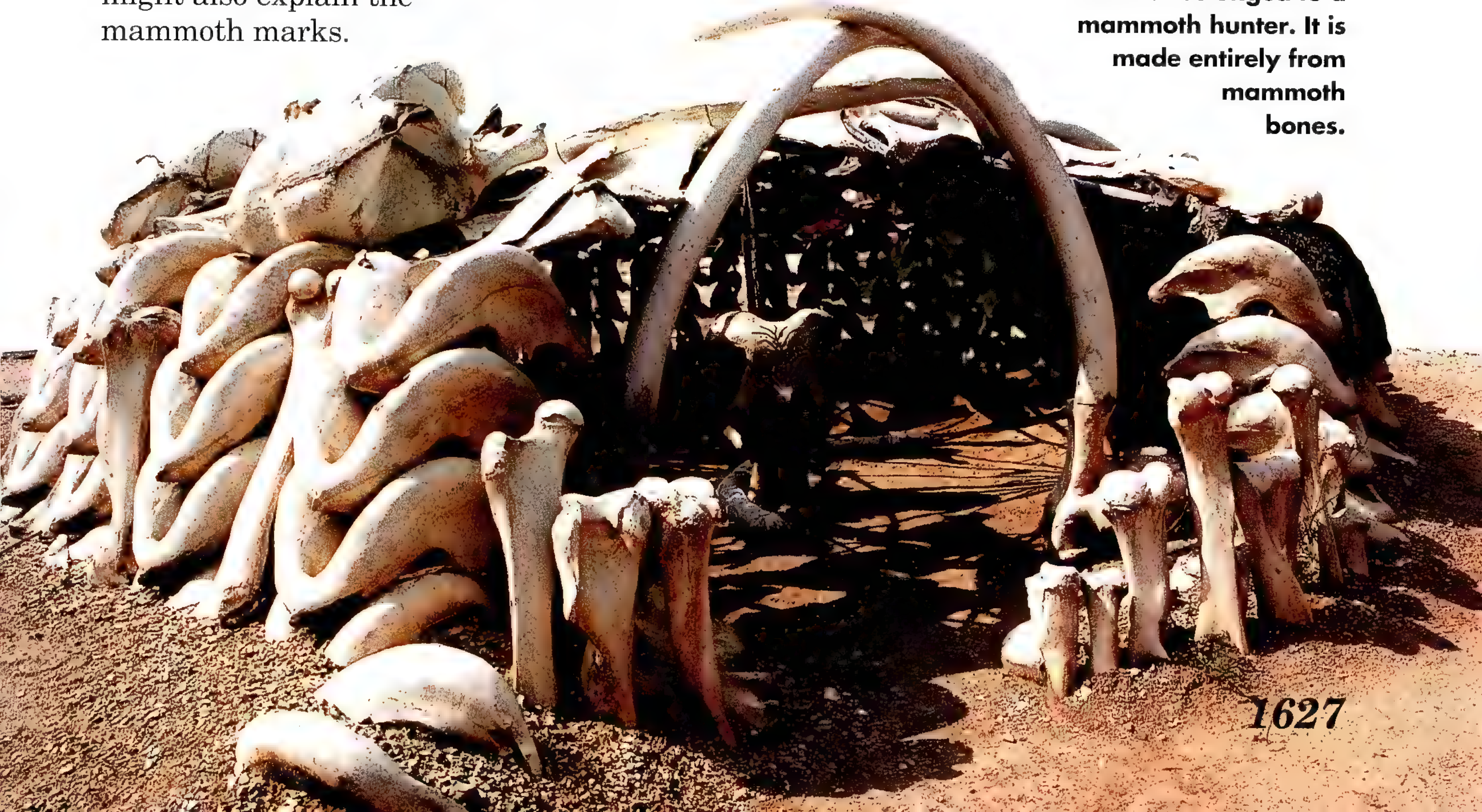
In 1965, a Russian farmer discovered a huge beehive-shaped hut that was completely built from mammoth bones. The hut was probably made 20,000 years ago. Experts think people used bones to build shelters because wood was scarce.

TRAMPLED ON

Experts thought cuts in the mammoth bones were made by hunters' spears. But similar marks have been found on elephant bones, which were made by other elephants trampling on the bodies. This might also explain the mammoth marks.

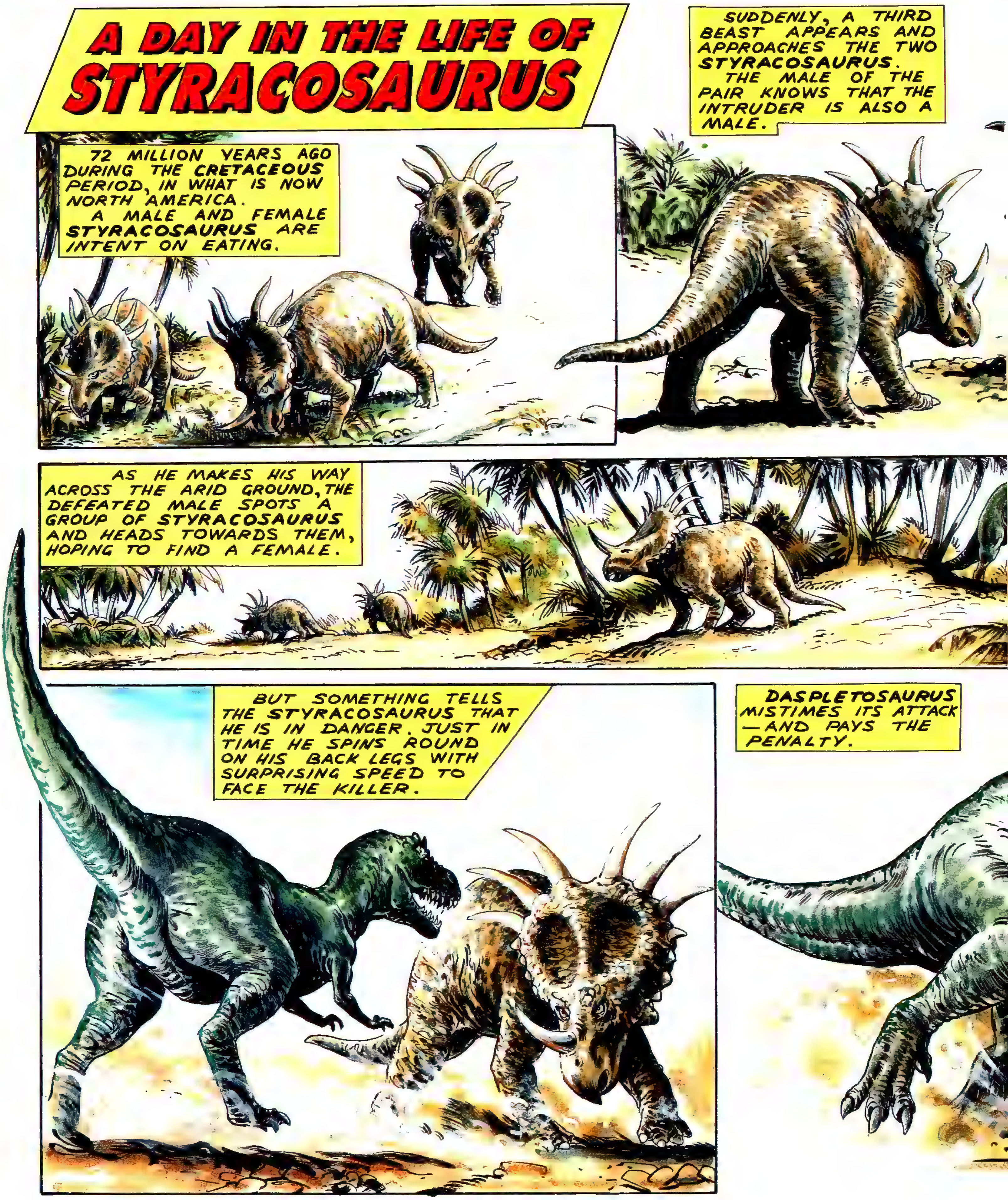
Is it true that mammoths were seen in the 16th century?

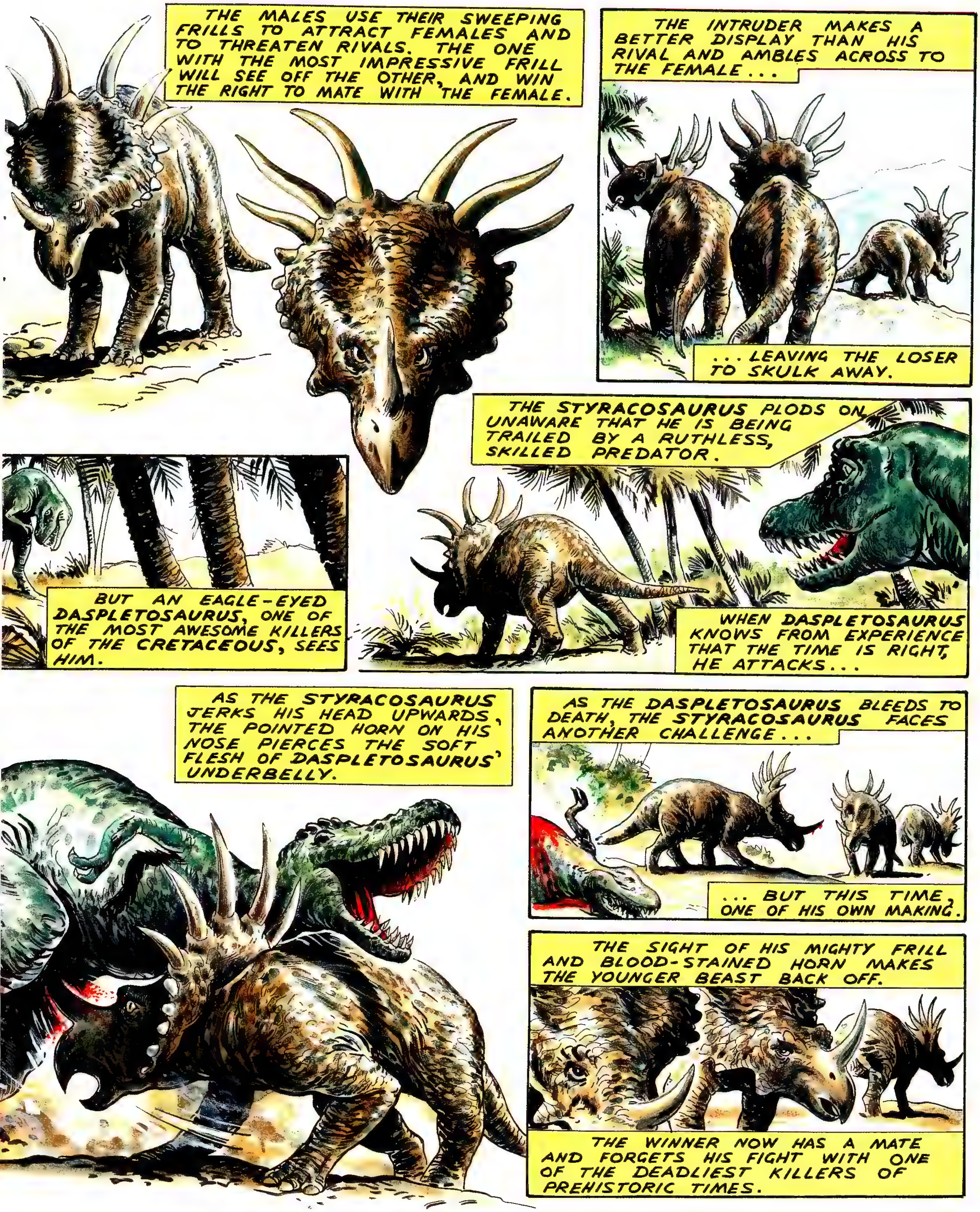
A strange animal was sighted in the 16th century, but no one knows if it really was a mammoth. In 1850, however, an expedition across Serbia reported seeing a 'large hairy elephant'. The local people told the expedition that they had seen many such animals. The Serbians called them 'mountains of meat'.



This hut belonged to a mammoth hunter. It is made entirely from mammoth bones.

A DAY IN THE LIFE OF STYRACOSAURUS


72 MILLION YEARS AGO DURING THE CRETACEOUS PERIOD, IN WHAT IS NOW NORTH AMERICA.
A MALE AND FEMALE STYRACOSAURUS ARE INTENT ON EATING.
SUDDENLY, A THIRD BEAST APPEARS AND APPROACHES THE TWO STYRACOSAURUS.
THE MALE OF THE PAIR KNOWS THAT THE INTRUDER IS ALSO A MALE.
AS HE MAKES HIS WAY ACROSS THE ARID GROUND, THE DEFEATED MALE SPOTS A GROUP OF STYRACOSAURUS AND HEADS TOWARDS THEM, HOPING TO FIND A FEMALE.
BUT SOMETHING TELLS THE STYRACOSAURUS THAT HE IS IN DANGER. JUST IN TIME HE SPINS ROUND ON HIS BACK LEGS WITH SURPRISING SPEED TO FACE THE KILLER.
DASPLETOSAURUS MISTIMES ITS ATTACK — AND PAYS THE PENALTY.


THE MALES USE THEIR SWEEPING FRILLS TO ATTRACT FEMALES AND TO THREATEN RIVALS. THE ONE WITH THE MOST IMPRESSIVE FRILL WILL SEE OFF THE OTHER, AND WIN THE RIGHT TO MATE WITH THE FEMALE.
THE INTRUDER MAKES A BETTER DISPLAY THAN HIS RIVAL AND AMBLES ACROSS TO THE FEMALE...
...LEAVING THE LOSER TO SKULK AWAY.
THE STYRACOSAURUS PLODS ON, UNAWARE THAT HE IS BEING TRAILED BY A RUTHLESS, SKILLED PREDATOR.
BUT AN EAGLE-EYED DASPLETOSAURUS, ONE OF THE MOST AWESOME KILLERS OF THE CRETACEOUS, SEES HIM.
WHEN DASPLETOSAURUS KNOWS FROM EXPERIENCE THAT THE TIME IS RIGHT, HE ATTACKS...
AS THE STYRACOSAURUS JERKS HIS HEAD UPWARDS, THE POINTED HORN ON HIS NOSE PIERCES THE SOFT FLESH OF DASPLETOSAURUS' UNDERBELLY.
AS THE DASPLETOSAURUS BLEEDS TO DEATH, THE STYRACOSAURUS FACES ANOTHER CHALLENGE...
...BUT THIS TIME, ONE OF HIS OWN MAKING.
THE SIGHT OF HIS MIGHTY FRILL AND BLOOD-STAINED HORN MAKES THE YOUNGER BEAST BACK OFF.
THE WINNER NOW HAS A MATE AND FORGETS HIS FIGHT WITH ONE OF THE DEADLIEST KILLERS OF PREHISTORIC TIMES.

Improve and test your knowledge with...

FACT FILE

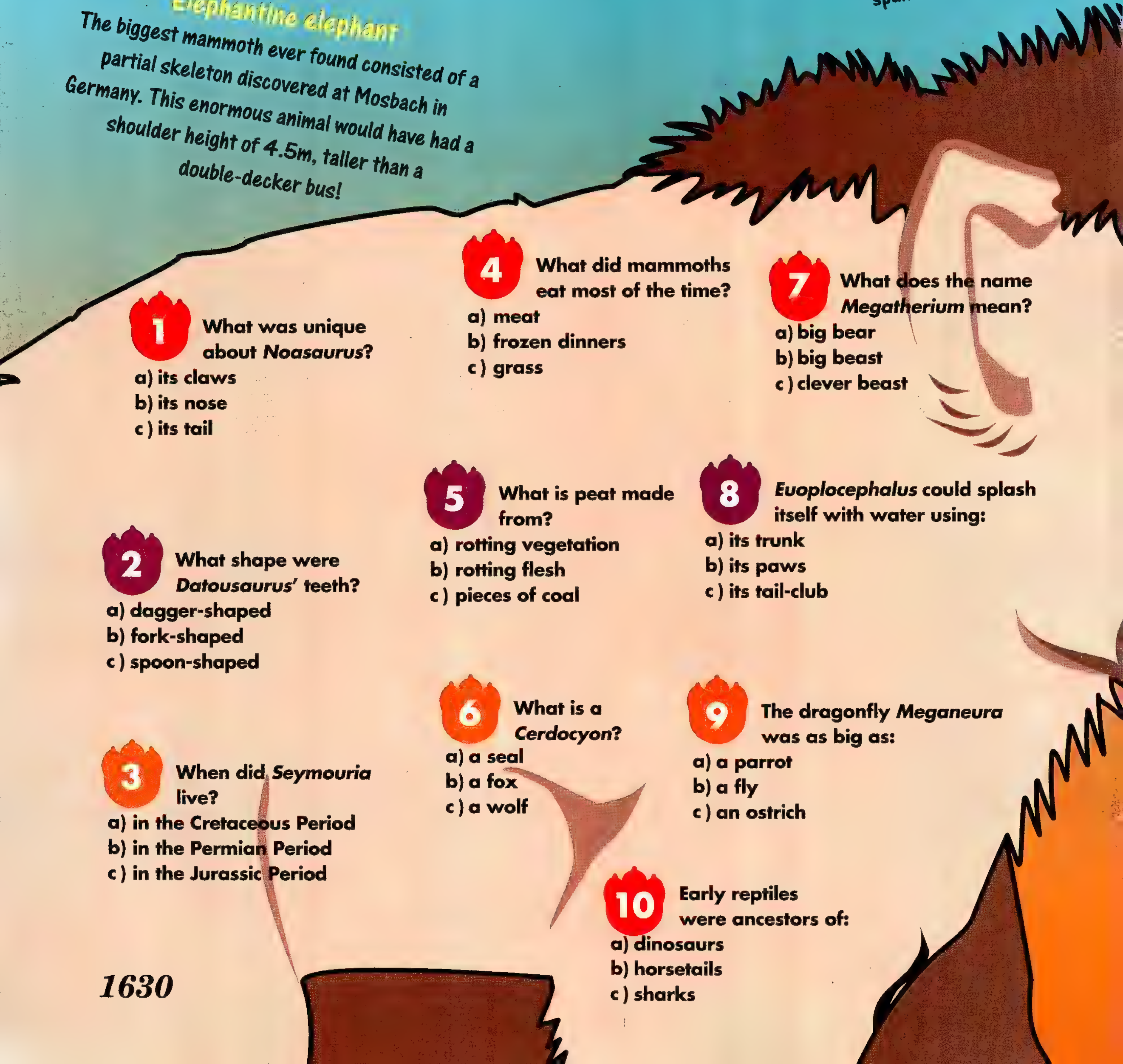
Follow the footprints on the mammoth's back and answer the questions posed.

Is it a plane?

Scientists used to think that Pteranodon, with its 9m wingspan, was the biggest thing that could possibly fly. Then they discovered Quetzalcoatlus with its wing span of 11m.

Elephantine elephant

The biggest mammoth ever found consisted of a partial skeleton discovered at Mosbach in Germany. This enormous animal would have had a shoulder height of 4.5m, taller than a double-decker bus!



1 What was unique about *Noasaurus*?

a) its claws
b) its nose
c) its tail

2 What shape were *Datousaurus'* teeth?

a) dagger-shaped
b) fork-shaped
c) spoon-shaped

3 When did *Seymouria* live?

a) in the Cretaceous Period
b) in the Permian Period
c) in the Jurassic Period

4 What did mammoths eat most of the time?

a) meat
b) frozen dinners
c) grass

5 What is peat made from?

a) rotting vegetation
b) rotting flesh
c) pieces of coal

6 What is a *Cerdocyon*?

a) a seal
b) a fox
c) a wolf

7 What does the name *Megatherium* mean?

a) big bear
b) big beast
c) clever beast

8 *Euoplocephalus* could splash itself with water using:

a) its trunk
b) its paws
c) its tail-club

9 The dragonfly *Meganeura* was as big as:

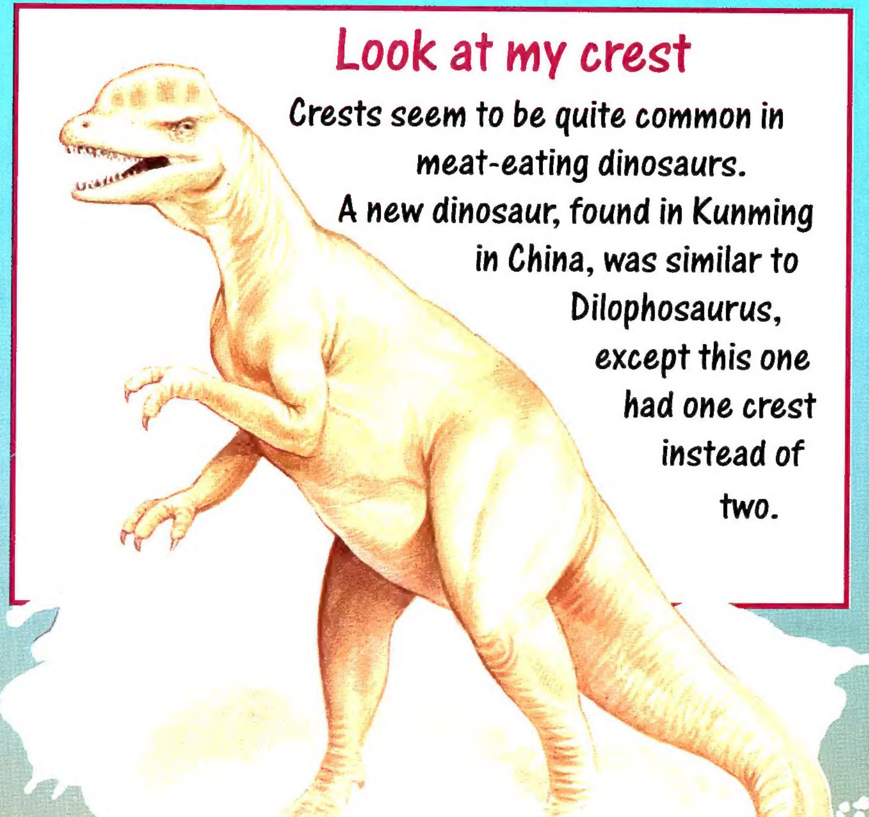
a) a parrot
b) a fly
c) an ostrich

10 Early reptiles were ancestors of:

a) dinosaurs
b) horsetails
c) sharks

Dinosaurs on top

The film 'Jurassic Park' won a host of awards and is one of the most successful films ever made – so perhaps dinosaurs still rule the world after all!



Look at my crest

Crests seem to be quite common in meat-eating dinosaurs. A new dinosaur, found in Kunming in China, was similar to Dilophosaurus, except this one had one crest instead of two.

Expecting a lot

An exhibition called 'Dinosaurs Live' was recently held in Memphis Zoo, USA. It featured a number of mechanical, model dinosaurs. Some people asked for their money back when they found that the dinosaurs were not alive.

Answers to the questions on inside back cover

MAMMOTH **5 MYA**

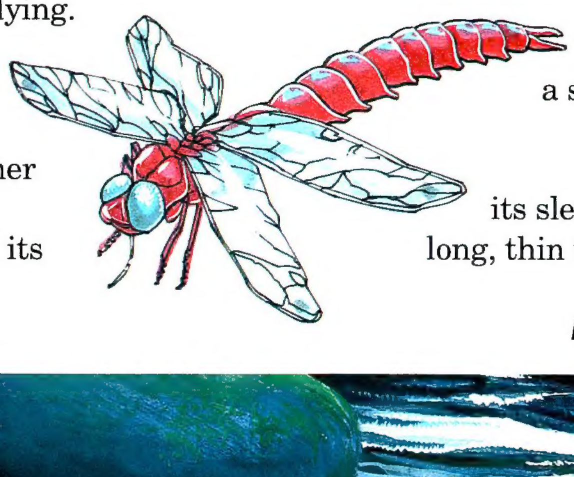
Mammoths were large, elephant-like animals that lived between 5 million and 10,000 years ago. The most famous of this group was the woolly mammoth, which lived in northern Europe and Russia. The name means ‘burrower’.

MEGALOCEROS **2 MYA**

Megaloceros (meg-al-oh-ser-os) lived in Europe and Asia in Pleistocene times. Its amazing antlers were shed each spring and replacements were fully grown by the autumn of the same year. Its name means ‘big horns’.

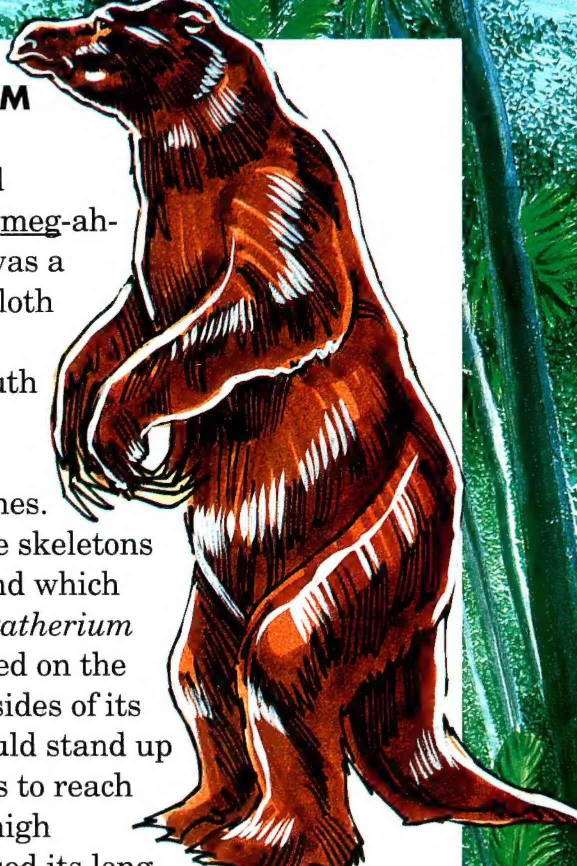
MEGANEURA
290 MYA

Meganeura (mega-new-ra) is the largest winged insect so far discovered. It could flap its two pairs of wings up and down, but could not fold them back when it wasn’t flying. *Meganeura* lived near swamps in the Late Carboniferous Period, and fed on other insects. It looked like today’s dragonfly and its name means ‘big-veined’.



MEGATHERIUM
35 MYA

Elephant-sized *Megatherium* (meg-ah-thee-ree-um) was a giant ground sloth that lived in Argentina, South America, in Pliocene and Pleistocene times. Many complete skeletons have been found which show that *Megatherium* probably walked on the knuckles and sides of its four feet. It could stand up on its hind legs to reach the leaves on high branches. It used its long, curved claws to gather food and hold on to stems. The name *Megatherium* means ‘big beast’.

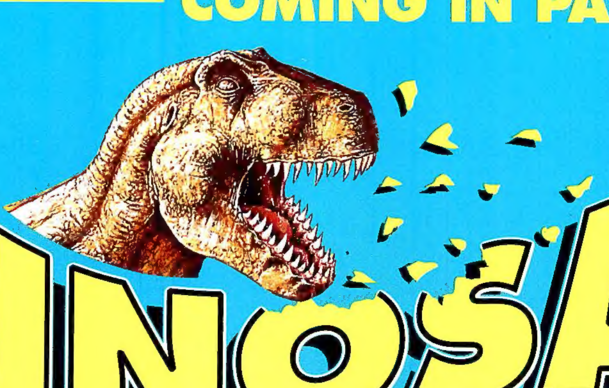


MEGAZOSTRODON **195 MYA**

One of the first mammals, *Megazostrodon* (mega-zoss-trow-don) lived in the Late Triassic Period in South Africa. It was a tiny, shrew-like animal. *Megazostrodon* had a sharply pointed skull with a slim lower jaw. Its small limbs were tucked beneath its slender, furry body and it had a long, thin tail.

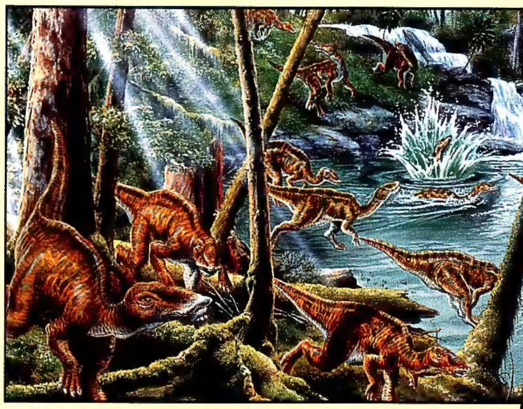
MYA = MILLION YEARS AGO

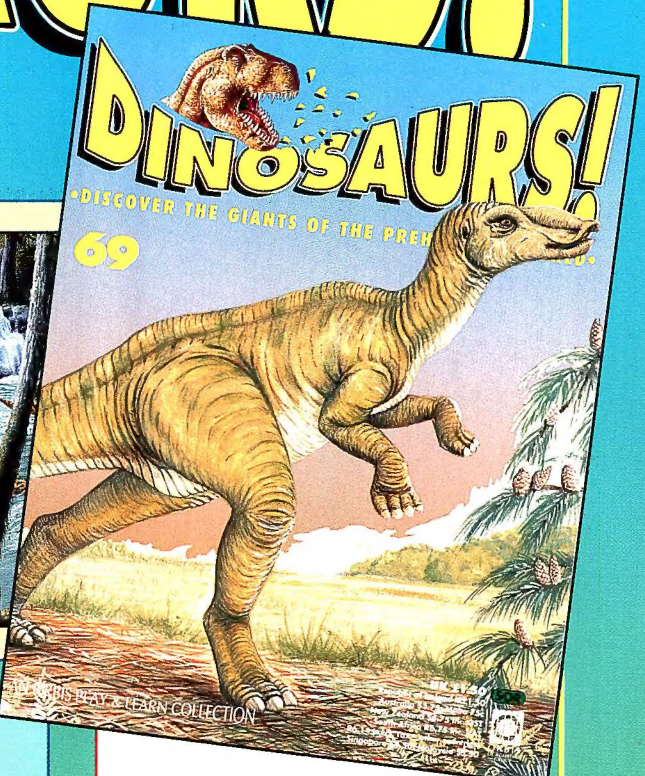
COMING IN PART 69 OF



DINOSAURS!

In TIME DETECTIVE discover the Ice Age lions that roamed North America. SPOTTER'S GUIDE focuses on eyes millions of years ago.




DINOSAURS!
•DISCOVER THE GIANTS OF THE PREH
69
ORBIS PLAY & LEARN COLLECTION

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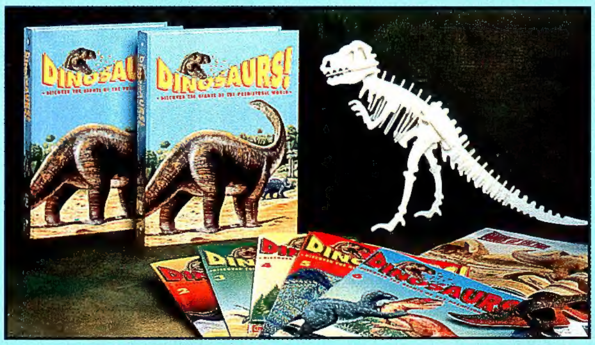

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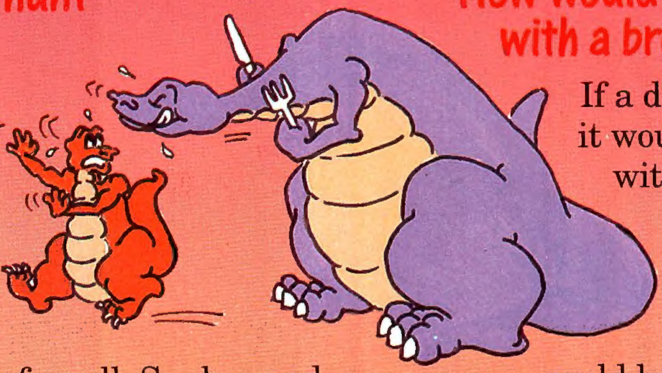
ANSWERS TO FACT FILE QUESTIONS: 1.a 2.c 3.b 4.c 5.a 6.b 7.b 8.c 9.a 10.a

Molly Lew

Dr David Norman of Cambridge University answers your dinosaur questions

ASK THE EXPERT

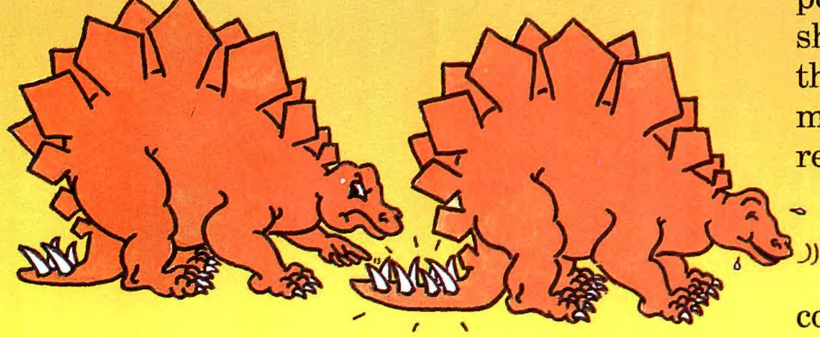
Did dinosaurs hunt by smell?



It is very unlikely that dinosaurs hunted by smell. It is really only mammals that have a well-developed sense of smell. Snakes and some lizards can pick up chemical smells on their forked tongues. But there is no evidence dinosaurs had forked tongues. Meat-eating dinosaurs used their eyesight and strong legs to hunt successfully.

Some pictures show Stegosaurus with four spines on its tail, others show it with eight. Which is true?

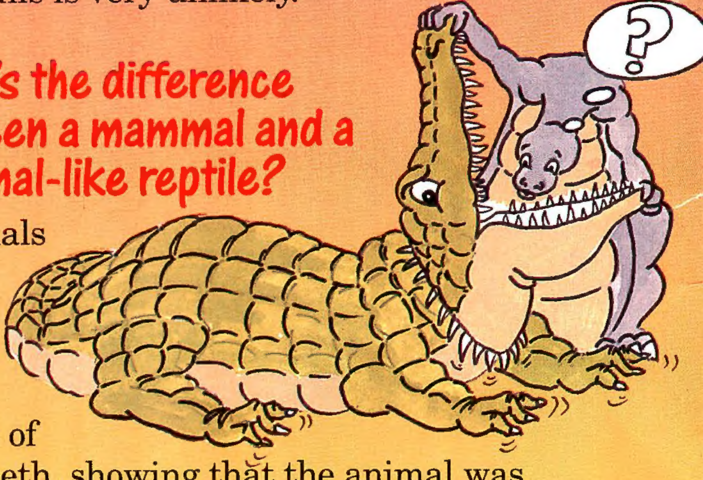
Some stegosaurs had four spines (*Stegosaurus stenops*) on the tail, while others had eight (*Stegosaurus ungulatus*). It is one of the differences that has been used to tell stegosaur species apart.



How would Deinonychus manage with a broken claw?

If a deinonychosaur broke a claw, it would probably try attacking with its good claw until the other one had healed. If it was unable to attack and kill its prey, then it would have starved to death, unless it could keep up with the pack and scavenge from the remains of the pack's kills. This is very unlikely.

What's the difference between a mammal and a mammal-like reptile?



Mammals have two sets of teeth: one set of milk teeth, showing that the animal was breast-fed when young; and one permanent set. The earliest mammals, show this distinctive feature and this is the reason why they are identified as mammals. Reptiles, even mammal-like reptiles, replace their teeth more or less continuously.

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